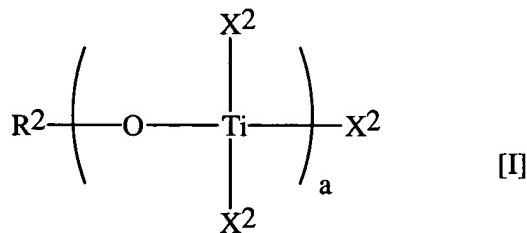


IN THE CLAIMS

Please amend the claims to read as follows:

1. (Currently Amended) A process for the producing a solid catalyst component (1) for  $\alpha$ -olefin polymerization, which comprises the steps of:
  - (1) reducing a titanium compound represented by the following formula [I] with an organomagnesium compound in the presence of an organosilicon compound having an Si-O bond, thereby obtaining a solid product, and
  - (2) contacting the solid product with a halogeno compound of the a Group 14 element selected from the group consisting of Si, Ge, Sn and Pb; and [.,.] at least one member selected from the group consisting of an electron donor compound (E1) and an organic acid halide, and a compound having a Ti-halogen bond, thereby obtaining the solid catalyst component (1) for  $\alpha$ -olefin polymerization,



wherein "a" is a number of 1 to 20, R<sup>2</sup> is a hydrocarbon group having 1 to 20 carbon atoms, and X<sup>2</sup> is a halogen atom or a hydrocarbyloxy group having 1 to 20 carbon atoms, and all of X<sup>2</sup> may be the same or different from one another.

2. (Currently Amended) The process for producing a solid catalyst component (1) for  $\alpha$ -olefin polymerization according to Claim 1, wherein the step (2) comprises:

- (i) contacting the solid product with the electron donor compound (E1) to obtain a contacted product, and
- (ii) contacting the contacted product obtained with the halogeno compound of ~~the~~ a Group 14 element selected from the group consisting of Si, Ge, Sn and Pb; and a compound having a Ti-halogen bond.

3. (Currently Amended) The process for producing a solid catalyst component (1) for  $\alpha$ -olefin polymerization according to Claim 1, wherein the step (2) comprises:

- (i) contacting the solid product with the compound having a Ti-halogen bond and the organic acid halide to obtain a contacted product, and
- (ii) contacting the contacted product obtained with the halogeno compound of ~~the~~ a Group 14 element selected from the group consisting of Si, Ge, Sn and Pb; and~~[,]~~ the electron donor compound (E1) and the compound having a Ti-halogen bond.

4. (Currently Amended) The process for producing a solid catalyst component (1) for  $\alpha$ -olefin polymerization according to Claim 1, wherein the step (2) comprises:

- (i) contacting the solid product with a mixture of the compound having a Ti-halogen bond and an ether to obtain a contacted product,
- (ii) contacting the contacted product obtained in the above (i) with the organic acid halide to obtain a contacted product,

(iii) contacting the contacted product obtained in the above (ii) with a mixture of the halogeno compound of ~~the~~ a Group 14 element selected from the group consisting of Si, Ge, Sn and Pb; and [ , ] a carboxylic acid ester and an ether to obtain a contacted product, and

(iv) contacting two times the contacted product obtained in the above (iii) with a mixture of the compound having a Ti-halogen bond and an ether.

5. (Currently Amended) The process for producing a solid catalyst component (1) for  $\alpha$ -olefin polymerization according to Claim 1, wherein the step (2) comprises:

(i) contacting the solid product with a mixture of the compound having a Ti-halogen bond and an ether to obtain a contacted product,

(ii) contacting the contacted product obtained in the above (i) with the organic acid halide to obtain a contacted product,

(iii) contacting the contacted product obtained in the above (ii) with a mixture of the compound having a Ti-halogen bond, a carboxylic acid ester and an ether to obtain a contacted product,

(iv) contacting the contacted product obtained in the above (iii) with a mixture of the halogeno compound of ~~the~~ a Group 14 element selected from the group consisting of Si, Ge, Sn and Pb; and an ether to obtain a contacted product, and

(v) contacting the contacted product obtained in the above (iv) with a mixture of the compound having a Ti-halogen bond and an ether.

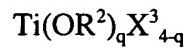
6. (Currently Amended) The process for producing a solid catalyst component (1) for  $\alpha$ -olefin polymerization according to Claim 1, wherein the halogeno compound of the a Group 14 element selected from the group consisting of Si, Ge, Sn and Pb; and contains a compound represented by the following formula,



wherein M is an atom belonging to the Group 14, R<sup>1</sup> is a hydrocarbon group having 1 to 20 carbon atoms, X<sup>1</sup> is a halogen atom, m is a valence of M, and n is a number satisfying 0 < n ≤ m.

7. (Original) The process for producing a solid catalyst component (1) for  $\alpha$ -olefin polymerization according to Claim 6, wherein M contains a silicon atom.

8. (Original) The process for producing a solid catalyst component (1) for  $\alpha$ -olefin polymerization according to Claim 1, wherein the titanium compound contains a compound represented by the following formula,



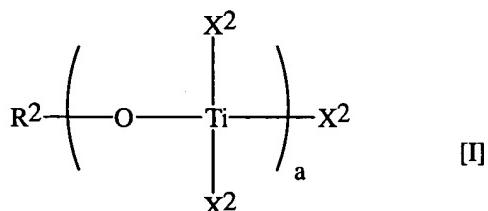
wherein R<sup>2</sup> is a hydrocarbon group having 1 to 20 carbon atoms, X<sup>3</sup> is a halogen atom, and q is a number satisfying 0 < q ≤ 4.

9. (Original) The process for producing a solid catalyst component (1) for  $\alpha$ -olefin polymerization according to Claim 1, wherein "a" in the formula [I] is 2 or 4.

10. (Currently Amended) A process for producing a solid catalyst component (2) for  $\alpha$ -olefin polymerization, which comprises the steps of:

(1) reducing a titanium compound represented by the following formula [I] with an organomagnesium compound in the presence of an organosilicon compound having an Si-O bond and an ester compound, thereby obtaining a solid product, and

(2) contacting the solid product with a halogeno compound of the a Group 14 element selected from the group consisting of Si, Ge, Sn and Pb; and[.,] at least one member selected from the group consisting of an electron donor compound (E1) and an organic acid halide, and a compound having a Ti-halogen bond, thereby obtaining the solid catalyst component (2) for  $\alpha$ -olefin polymerization,



wherein "a" is a number of 1 to 20,  $R^2$  is a hydrocarbon group having 1 to 20 carbon atoms, and  $X^2$  is a halogen atom or a hydrocarbyloxy group having 1 to 20 carbon atoms, and all of  $X^2$  may be the same or different from one another.

11. (Currently Amended) The process for producing a solid catalyst component (2) for  $\alpha$ -olefin polymerization according to Claim 10, wherein the step (2) comprises:

- (i) contacting the solid product with the electron donor compound (E1) to obtain a contacted product, and
- (ii) contacting the contacted product obtained with the halogeno compound of the a Group 14 element selected from the group consisting of Si, Ge, Sn and Pb; and the compound having a Ti-halogen bond.

12. (Currently Amended) The process for producing a solid catalyst component (2) for  $\alpha$ -olefin polymerization according to Claim 10, wherein the step (2) comprises:

- (i) contacting the solid product with the compound having a Ti-halogen bond and the organic acid halide to obtain a contacted product, and
- (ii) contacting the contacted product obtained with the halogeno compound of the a Group 14 element selected from the group consisting of Si, Ge, Sn and Pb; and[[,]] the electron donor compound (E1) and the compound having a Ti-halogen bond.

13. (Currently Amended) The process for producing a solid catalyst component (2) for  $\alpha$ -olefin polymerization according to Claim 10, wherein the step (2) comprises:

- (i) contacting the solid product with a mixture of the compound having a Ti-halogen bond and an ether to obtain a contacted product,
- (ii) contacting the contacted product obtained in the above (i) with the organic acid halide to obtain a contacted product,

(iii) contacting the contacted product obtained in the above (ii) with a mixture of the halogeno compound of ~~the a~~ Group 14 element selected from the group consisting of Si, Ge, Sn and Pb; and[[,]] a carboxylic acid ester and an ether to obtain a contacted product, and

(iv) contacting two times the contacted product obtained in the above (iii) with a mixture of the compound having a Ti-halogen bond and an ether.

14. (Currently Amended) The process for producing a solid catalyst component (2) for  $\alpha$ -olefin polymerization according to Claim 10, wherein the step (2) comprises:

(i) contacting the solid product with a mixture of the compound having a Ti-halogen bond and an ether to obtain a contacted product,

(ii) contacting the contacted product obtained in the above (i) with the organic acid halide to obtain a contacted product,

(iii) contacting the contacted product obtained in the above (ii) with a mixture of the compound having a Ti-halogen bond, a carboxylic acid ester and an ether to obtain a contacted product,

(iv) contacting the contacted product obtained in the above (iii) with a mixture of the halogeno compound of ~~the a~~ Group 14 element selected from the group consisting of Si, Ge, Sn and Pb; and an ether to obtain a contacted product, and

(v) contacting the contacted product obtained in the above (iv) with a mixture of the compound having a Ti-halogen bond and an ether.

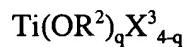
15. (Currently Amended) The process for producing a solid catalyst component (2) for  $\alpha$ -olefin polymerization according to Claim 10, wherein the halogeno compound of the a Group 14 element selected from the group consisting of Si, Ge, Sn and Pb; and contains a compound represented by the following formula,



wherein M is an atom belonging to the a Group 14 element selected from the group consisting of Si, Ge, Sn and Pb, R<sup>1</sup> is a hydrocarbon group having 1 to 20 carbon atoms, X<sup>1</sup> is a halogen atom, m is a valence of M, and n is a number satisfying 0 < n ≤ m.

16. (Previously Presented) The process for producing a solid catalyst component (2) for  $\alpha$ -olefin polymerization according to Claim 15, wherein M contains a silicon atom.

17. (Previously Presented) The process for producing a solid catalyst component (2) for  $\alpha$ -olefin polymerization according to Claim 10, wherein the titanium compound contains a compound represented by the following formula,



wherein R<sup>2</sup> is a hydrocarbon group having 1 to 20 carbon atoms, X<sup>3</sup> is a halogen atom, and q is a number satisfying 0 < q ≤ 4.

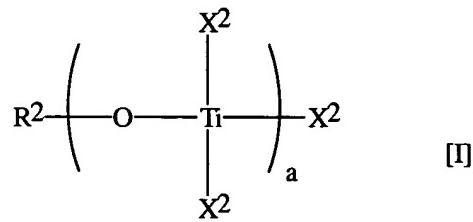
18. (Previously Presented) The process for producing a solid catalyst component (2) for α-olefin polymerization according to Claim 10, wherein “a” in the formula [I] is 2 or 4.

19. (Currently Amended) A process for producing a catalyst (1) for α-olefin polymerization, which comprises the steps of:

(1) reducing a titanium compound represented by the following formula [I] with an organomagnesium compound in the presence of an organosilicon compound having an Si-O bond, thereby obtaining a solid product,

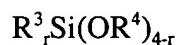
(2) contacting the solid product with a halogeno compound of the a Group 14 element selected from the group consisting of Si, Ge, Sn and Pb; and, at least one member selected from the group consisting of an electron donor compound (E1) and an organic acid halide, and a compound having a Ti-halogen bond, thereby obtaining a solid catalyst component (1) for α-olefin polymerization, and

(3) contacting the solid catalyst component (1), an organoaluminum compound and an electron donor compound (E2) with one another, thereby obtaining the catalyst (1) for α-olefin polymerization,



wherein "a" is a number of 1 to 20, R<sup>2</sup> is a hydrocarbon group having 1 to 20 carbon atoms, and X<sup>2</sup> is a halogen atom or a hydrocarbyloxy group having 1 to 20 carbon atoms, and all of X<sup>2</sup> may be the same or different from one another.

20. (Original) The process for producing a catalyst (1) for  $\alpha$ -olefin polymerization according to Claim 19, wherein the electron donor compound (E2) contains an alkoxysilicon compound represented by the following formula,

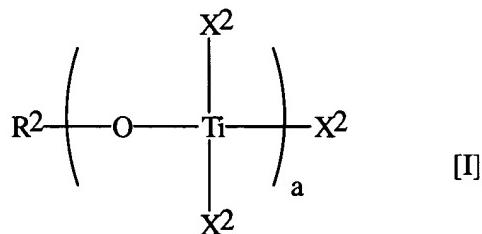


wherein R<sup>3</sup> is a hydrocarbon group having 1 to 20 carbon atoms or a hydrogen atom, R<sup>4</sup> is a hydrocarbon group having 1 to 20 carbon atoms, r is a number satisfying 0 < r ≤ 4, and all of R<sup>3</sup> and all of R<sup>4</sup> may be the same or different from one another, respectively.

21. (Currently Amended) A process for producing a catalyst (2) for  $\alpha$ -olefin polymerization, which comprises the steps of:

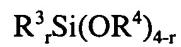
- (1) reducing a titanium compound represented by the following formula [I] with an organomagnesium compound in the presence of an organosilicon compound having an Si-O bond and an ester compound, thereby obtaining a solid product,
- (2) contacting the solid product with a halogeno compound of the a Group 14 element selected from the group consisting of Si, Ge, Sn and Pb; and, at least one member selected from the group

consisting of an electron donor compound (E1) and an organic acid halide, and a compound having a Ti-halogen bond, thereby obtaining a solid catalyst component (2) for  $\alpha$ -olefin polymerization, and (3) contacting the solid catalyst component (2), an organoaluminum compound and an electron donor compound (E2) with one another, thereby obtaining the catalyst (2) for  $\alpha$ -olefin polymerization,



wherein "a" is a number of 1 to 20, R<sup>2</sup> is a hydrocarbon group having 1 to 20 carbon atoms, and X<sup>2</sup> is a halogen atom or a hydrocarbyloxy group having 1 to 20 carbon atoms, and all of X<sup>2</sup> may be the same or different from one another.

22. (Original) The process for producing a catalyst (2) for  $\alpha$ -olefin polymerization according to Claim 21, wherein the electron donor compound (E2) contains an alkoxysilicon compound represented by the following formula,



wherein R<sup>3</sup> is a hydrocarbon group having 1 to 20 carbon atoms or a hydrogen atom, R<sup>4</sup> is a hydrocarbon group having 1 to 20 carbon atoms, r is a number satisfying 0 < r ≤ 4, and all of R<sup>3</sup> and all of R<sup>4</sup> may be the same or different from one another, respectively.

23. (Cancelled)

24. (Cancelled)